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EXAMINER

BROWN, VERNAL U

ART UNIT	PAPER NUMBER
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2635

12

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/729,836

Applicant(s)

SUGANUMA ET AL.

Examiner

Vernal U Brown

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18,21-24,26,27 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18,21-24,26,27 and 30-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

This action is responsive to communication filed on February 12, 2004.

Response to Amendment

The examiner has acknowledged the amendment of claims 1 and 26.

Allowable Subject Matter

The indicated allowability of claims 1-18, 21-24, 26-27, and 30-35 is withdrawn in view of the newly discovered reference(s) to Doyle U.S Patent 5815071. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Schmitz U.S Patent 5473540.

Regarding claim 23, Schmitz teaches a rewriting device (50) for rewriting control information stored an electronic control unit while communicating with an external device(col. 8 lines 36-38), the rewriting device comprising: receiving means for receiving a rewriting permission from the external device (col. 8 lines 45-48); and control information transmitting means (60) for acquiring the control information from the

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external device after executing predetermined processing with the electronic control unit in response to the rewriting permission, and transmitting the control information to the electronic control unit (col. 8 lines 36-41).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, 9-10, and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071.

Regarding claims 1 and 26, Schmitz teaches a control information rewriting system for a vehicle (col. 3 lines 65-67) comprising: an electronic control unit (16) mounted in the vehicle for a vehicle control and having control information stored in electrically rewritable memory for the vehicle control (col. 5 lines 58-60); a rewriting device (20) connectable to the electronic control unit for rewriting the control information (col. 5 lines 60-61); and a control center (12) for performing data communication with the rewriting device (col. 5 lines 62-64). Schmitz also teaches a control center which includes storing means for storing access information (col. 6 lines 5-7) and enable and disable rewriting operation of the rewriting device based on the stored information (col. 7 lines 51-59). Schmitz is however silent on teaching the control center stores identification

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information of the rewriting device and associated information associated with the identification information, and legitimacy determining means for acquiring the identification information and the associated information of the rewriting device in data communication with the rewriting device and transmitting the access information stored in the storing means to the rewriting device when an association relationship of the acquired information matches and does not match an association relationship stored in the storing means. Doyle in an art related invention in the same field of endeavor of programming of a vehicle control unit teaches a rewriting device (MCT) for writing vehicle control parameters to the vehicle ECU (col. 4 lines 10-14). Doyle teaches the rewriting device communicating with the control center and the store information associated with a particular rewriting device (col. 5 lines 50-55). The storing of messages associated with a particular rewriting device implied the storing of identification information of the rewriting device.

It would have been obvious to one of ordinary skill in the art for the control center to stores identification information of the rewriting device and associated information associated with the identification information, and legitimacy determining means for acquiring the identification information and the associated information of the rewriting device in data communication with the rewriting device and transmitting the access information stored in the storing means to the rewriting device when an association relationship of the acquired information matches and does not match an association relationship stored in the storing means in Schmitz as evidenced by Doyle because Schmitz suggests a rewriting device receiving rewriting instruction from a control center and Doyle teaches a rewriting device (MCT) for writing vehicle control parameters to the

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vehicle ECU . Doyle teaches the rewriting device communicating with the control center and the store information associated with a particular rewriting device and the storing of messages associated with a particular rewriting device implied the storing of identification information of the rewriting device.

Regarding claim 8, Schmitz teaches the control center (12) includes modification data (new program data) storing means storing modification data of the control information (col. 8 lines 38-50) and the control and transmits the modification data to the rewriting device when the electronic control unit determines that the rewriting device is legitimate (col. 8 lines 45-58).

Regarding claim 9, Schmitz teaches the electronic control unit transmits vehicle information to the rewriting device when determining that the rewriting device is legitimate (col. 8 lines 45-58); and the control center further includes update history storing means storing an update history of the control information pertaining to the vehicle (col. 6 lines 4-7). Schmitz further teaches of programming the vehicle includes identifying the vehicle type to be program and generating the appropriate program data for use in programming the identified vehicle and determines necessity of rewriting of the control information in that vehicle, and transmits the modification data to the rewriting device when determining that rewriting is necessary (col. 5 lines 16-27).

Regarding claims 10, 14, and 17, Schmitz in view of Doyle teaches the control center (host computer) determines whether or not the vehicle controller requires reprogramming (col. 8 lines 36-41) and maintain record of the vehicle information to determine if a reprogramming is necessary (col. 8 lines 48-50) but is silent on teaching control center updates the history specific to the vehicle when rewriting of control

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information is completed by the electronic control unit. One skilled in the art recognizes that in order for the control center to determine whether or not an upgrade is necessary, an upgrade history must be maintained.

It would have been obvious to one of ordinary skill in the art for the control center updates the history specific to the vehicle when rewriting of control information is completed by the electronic control unit in Schmitz in view of Doyle because Schmitz in view of Doyle suggests the control center making the decision as to whether or not the vehicle should be programmed with updates and in order to make a decision as to whether or not the vehicle programming must be upgraded an upgrade history must be maintained.

Regarding claim 13, Schmitz teaches a control center (12) for communication with a control information rewriting device (20) which rewrites control information stored in a nonvolatile memory (col. 5 line 58-col. 6 line 7) but is silent on teaching the control center includes storing means for storing an associated relationship between identification of the rewriting device and associated information related to the identification information and legitimacy determining means in data communication with the writing device for acquiring an association relationship between the identification information and information associated with the identification information. Doyle in an art related invention in the same field of endeavor of programming of a vehicle control unit teaches a rewriting device (MCT) for writing vehicle control parameters to the vehicle ECU (col. 4 lines 10-14). Doyle teaches the rewriting device communicating with the control center and the store information associated with a particular rewriting device (col. 5 lines 50-55, col. 7 lines 9-15) and also teaches

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legitimacy determining means which authorize the rewriting device to update the vehicle's ECU parameters (col. 7 lines 12-16). The storing of messages associated with a particular rewriting device implied the storing of identification information of the rewriting device so as to identify a particular rewriting device.

It would have been obvious to one of ordinary skill in the art to control center includes storing means for storing an associated relationship between identification of the rewriting device and associated information related to the identification information and legitimacy determining means in data communication with the writing device for acquiring an association relationship between the identification information and information associated with the identification information in Schmitz as evidenced by Doyle because Schmitz suggests a control center for communication with a control information rewriting device which rewrites control information stored in a nonvolatile memory and Doyle teaches a rewriting device communicating with the control center and store information associated with a particular rewriting device and also teaches legitimacy determining means which authorize the rewriting device to update the vehicle's ECU parameters. The storing of messages associated with a particular rewriting device implied the storing of identification information of the rewriting device so as to identify a particular rewriting device in order to enable a particular rewriting device to be addressed.

Regarding claim 15, Schmitz teaches a control information transmitting means (60) for transmitting modification data of the control information to the rewriting device (col. 8 lines 36-37).

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Regarding claim 16, Schmitz teaches the control center comprises determining means for determining whether the modification data should be transmitted to the rewriting device (col. 5 lines 62-67) based on prior knowledge (programming history) of the vehicle (col. 5 lines 48-50, col. 5 lines 60-62).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071 and further in view of Takagi et al. U.S Patent 6285948 .

Regarding claim 2, Schmitz in view of Doyle teaches the rewriting device acquires access information specific to the electronic control unit from the control center (col. 5 line 65- col. 6 line 2) but is silent on teaching the rewriting device acquires from the control center as the access information a function f specific to a function F stored in the electronic control unit, and transmits to the electronic control unit a function value $f(r)$ specific to a predetermined value r transmitted from the electronic control unit; and the electronic control unit determines that the rewriting device is legitimate if a function value $F(f(r))$ specific to the function value $f(r)$ transmitted from the rewriting device corresponds to the transmitted predetermined value r . Takagi et al. in an art related Control Apparatus And Method Having Program Rewriting Function invention teaches a rewriting device acquiring access information specific to the identification stored in the control unit of the vehicle and the control unit determines the legitimacy of the rewriting

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device based on function generated from the identification values stores in the control unit (col. 6 lines 10-51).

It would have been obvious to one of ordinary skill in the art for the rewriting device acquires from the control center as the access information a function f specific to a function F stored in the electronic control unit, and transmits to the electronic control unit a function value $f(r)$ specific to a predetermined value r transmitted from the electronic control unit; and the electronic control unit determines that the rewriting device is legitimate if a function value $F(f(r))$ specific to the function value $f(r)$ transmitted from the rewriting device corresponds to the transmitted predetermined value r in Schmitz in view of Doyle as evidenced by Takagi et al. because Schmitz in view of Doyle suggests the rewriting device acquires access information specific to the electronic control unit from the control center and Takagi et al. teaches a rewriting device acquiring access information specific to the identification stored in the control unit of the vehicle and the control unit determines the legitimacy of the rewriting device based on function generated from the identification values stores in the control unit in order to ensure the authenticity of the rewriting device.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071 and further in view of Takagi et al. U.S Patent 6285948 and further in view of Yano U.S Patent 6326705.

Regarding claim 3, Schmitz in view of Doyle in view of Takagi et al. is silent on teaching the predetermined value is a random number. Yano in an art related Vehicular Anti-Theft System teaches the use of access information that includes a random number

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(col. 3 lines 53-55) in order to prevent the decoding of the identification signal by an unauthorized means.

It would have been obvious to one of ordinary skill in the art to use a random number as the predetermined value in Schmitz in view of Doyle in view of Takagi et al. as evidenced by Yano because Schmitz in view of Doyle in view Takagi et al. suggests the rewriting device acquires access information specific to the electronic control unit from the control center and Yano teaches the use of access information that includes a random number in order to prevent the decoding of the identification signal by an unauthorized means.

Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071 in view of Deo U.S Patent 5594227.

Regarding claims 4 and 7, Schmitz in view of Doyle teaches determining the legitimacy of the rewriting device (col. 5 line 64-col. 4 line 7) but is silent on teaching the refusal of access from the rewriting device for a fixed period, when determining a predetermined number of times that the rewriting device is not legitimate. The refusal of access from a device for a period of time after determining the device is illegitimate is widely used to prevent an unauthorized person from trying different password combination in order to gain as evidenced by Deo (col. 2 line 65- col. 3 line 2).

It would have been obvious to one of ordinary skill in the art to refuse access from the rewriting device for a fixed period, when determining a predetermined number of times that the rewriting device is not legitimate in Schmitz in view of Doyle as evidenced by Deo because Schmitz in view of Doyle suggests determining the legitimacy of the

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rewriting device and the refusal of access from a device for a period of time after determining the device is illegitimate is widely used to prevent an unauthorized person from trying different password combination in order to gain as evidenced by Deo.

Claims 5 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071 and further in view of Berr et al. U.S Patent 5278759.

Regarding claim 5, Schmitz in view of Doyle teaches selecting information regarding the programming of the vehicle and transmitting the associated information to the control center together with the identification information (col. 5 line 62-col. 6 line 2) but is not explicit in teaching the associated information is inputted to the rewriting device by a user every time a state wherein data communication with the control center is possible is established. Berra et al. in an art related invention in the same field of endeavor of reprogramming a vehicle's computer teaches the associated information is inputted to the rewriting device by a user every time a state wherein data communication with the control center is possible is established (col. 7 lines 15-23).

It would have been obvious to one of ordinary skill in the art to input information to the rewriting device by a user every time a state wherein data communication with the control center is possible is established in Schmitz in view of Doyle as evidenced by Berra et al. because Schmitz in view of Doyle suggests the use of a portable device to select information regarding the programming of the vehicle and the associated information is inputted to the rewriting device by a user every time a state wherein data

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communication with the control center is possible is established in order to receive the necessary programming information.

Regarding claim 12, Schmitz teaches downloading the reprogramming information to the rewriting device (col. 8 lines 36-41) but is silent on teaching the rewriting device stops rewriting of the control information if data communication between the rewriting device and the control center becomes impossible before rewriting of the control information is completed by the electronic control unit. Berr in an art related invention in the same field of endeavor of reprogramming a vehicle's computer teaches exiting the rewriting process when data communication between the rewriting device and the control center becomes impossible before rewriting of the control information is completed by the electronic control unit (col. 6 lines 51-52).

It would have been obvious to one of ordinary skill in the art for the rewriting device stops rewriting of the control information if data communication between the rewriting device and the control center becomes impossible before rewriting of the control information is completed by the electronic control unit in Schmitz as evidenced by Berr because Schmitz suggests downloading the reprogramming information to the rewriting device and Berr teaches exiting the rewriting process when data communication between the rewriting device and the control center becomes impossible before rewriting of the control information is completed by the electronic control unit to prevent the writing of incomplete downloaded data to the vehicle's computer.

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Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071 and further in view of Flick U.S Patent 5719551.

Regarding claim 6, Schmitz in view of Doyle teaches a communication link between the control center and the rewriting device (col. 5 line 63) but is silent on teaching the communication link is by way of a telephone network. Telephone network are widely use as a communication link for downloading information to vehicle related devices as evidenced by Flick (col. 7 lines 59-63).

It would have been obvious to one of ordinary skill in the art for the communication link between the control center and the rewriting device is by means of a telephone network in Schmitz in view of Doyle as evidenced by Flick because Schmitz in view of Doyle suggests a communication link between the control center and the rewriting device and telephone network are widely use as a communication link for downloading information to vehicle related devices as evidenced by Flick.

Claims 11 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071 and further in view Henderson et al. US Patent 4947163.

Regarding claims 11 and 27, Schmitz in view of Doyle teaches a control information rewriting system for a vehicle (col. 3 lines 65-67) but is silent on teaching the rewriting device erases the access information when rewriting of the control information is completed. Henderson et al. in an art related programming device teaches

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automatically erasing the programming information from the programming device after the programming has been completed (col. 17 lines 5-7).

It would have been obvious to one of ordinary skill in the art for the rewriting device to erase the access information when rewriting of the control information is completed in Schmitz in view of Doyle as evidenced by Henderson et al. because Schmitz in view of Doyle suggests a control information rewriting system for a vehicle having a rewriting device and Henderson et al. teaches automatically erasing the programming information from the programming device after the programming has been completed in order to secure the programming information.

Claim 18 , 30, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Koelle et al. U.S Patent 5802485.

Regarding claim 18, Schmitz teaches a control center (12) for communication with a control information rewriting device (50) which rewrites control information stored in an electronic control unit (col. 8 lines 38-40), the control center comprising: a processing unit (computer) programmed to receive information specific to the electronic control unit from the rewriting device (col. 5 lines 62-67), determine a modification data to which the control information is to be rewritten, and transmit the determined modification data to the rewriting device (col. 5 line 66-col. 6 line 2). Schmitz is however silent on teaching the electronic control unit determines whether the rewriting device is legitimate by receiving information which is formed by the rewriting device based on the access information received from the control center. Koelle et al. in an art related invention in the same field of endeavor of rewriting a vehicle control unit teaches the

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verification of the legitimacy of the rewriting tool before allowing the rewriting of the memory to take place (col. 6 lines 24-34) in order to prevent the unauthorized reprogramming of the vehicle.

It would have been obvious to one of ordinary skill in the art to verify the legitimacy of the rewriting tool in Schmitz as evidenced by Koelle because Schmitz suggests means of avoiding the unauthorized reprogramming of the vehicle and Koelle teaches the verification of the legitimacy of the rewriting tool before allowing the rewriting of the memory to take place in order to prevent the unauthorized reprogramming of the vehicle.

Regarding claim 30, Schmitz teaches a control information rewriting system for a vehicle (figure 4) comprising: an electronic control unit (16) mounted in the vehicle for a vehicle control and having control information stored in electrically rewritable nonvolatile memory (EEPROM, col. 2 lines 51-52) for the vehicle control; a rewriting device (50) connectable to the electronic control unit for rewriting the control information by using predetermined access information; and a control center (12) for performing data communication with the rewriting device (col. 8 lines 36-41) but is however silent on teaching the electronic control unit determines whether the rewriting device is legitimate by receiving information which is formed by the rewriting device based on the access information received from the control center. Koelle et al. in an art related invention in the same field of endeavor of rewriting a vehicle control unit teaches the verification of the legitimacy of the rewriting tool before allowing the rewriting of the memory to take place (col. 6 lines 24-34) in order to prevent the unauthorized reprogramming of the vehicle.

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It would have been obvious to one of ordinary skill in the art to verify the legitimacy of the rewriting tool in Schmitz as evidenced by Koelle because Schmitz suggests means of avoiding the unauthorized reprogramming of the vehicle and Koelle teaches the verification of the legitimacy of the rewriting tool before allowing the rewriting of the memory to take place in order to prevent the unauthorized reprogramming of the vehicle.

Regarding claims 33-34, Schmitz teaches the electronic control unit transmits specific information (vehicle type identification) specific to a vehicle to the rewriting device (col. 8 line 47); and the rewriting device determines the control information to be transmitted to the electronic control unit based on the specific information and the control information to be transmitted to the electronic control unit is determined by the control center (col. 4 lines 44-50).

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Koelle et al. U.S Patent 5802485 and further in view of Gurne et al. US Patent 6181992.

Regarding claims 21-22, Schmitz teaches that the control center maintain record of the vehicle and verify against the recorded information whether or not rewriting of the control information is necessary (col. 8 lines 45-52). Schmitz is however not explicit in teaching the processing unit is programmed to update the history of the rewriting operation. One skilled in the art recognizes that in order to maintain an accurate record of the programming of the control unit it is necessary to update the record of the

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programming of the vehicle's control unit and is also evidenced by Gurne et al. (col. 10 lines 41-60).

It would have been obvious to one of ordinary skill in the art for the processing unit to be programmed to update the history of the rewriting operation in Schmitz because Schmitz suggests the control center maintain record of the vehicle and verify against the recorded information whether or not rewriting of the control information is necessary and one skilled in the art recognizes that in order to maintain an accurate record of the programming of the control unit it is necessary to update the record of the programming of the vehicle's control unit as evidenced by Gurne et al.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Doyle U.S Patent 5815071 and further in view of Gilhousen et al. U.S Patent 4979170.

Regarding claim 24, Schmitz teaches a rewriting device having a communication link with an external source (col. 5 line 63) but is silent on teaching the rewriting device comprises transmitting means for transmitting identification information of the rewriting device to the external device so that the external device transmits the rewriting permission when the identification information is appropriate. Doyle in an art related invention in the same field of endeavor of programming of a vehicle control unit teaches a rewriting device (MCT) for writing vehicle control parameters to the vehicle ECU (col. 4 lines 10-14). Doyle further teaches the rewriting device communicate to the external source using a mobile communication network (col. 3 lines 30-42). The mobile communication network use the address of the terminal device as the identifier and the

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address is use in the communication between the terminal device and control station (U.S Patent 4979170, col. 10 lines 44-48).

It would have been obvious to one of ordinary skill in the art for the rewriting device comprises transmitting means for transmitting identification information of the rewriting device to the external device so that the external device transmits the rewriting permission when the identification information is appropriate in Schmitz as evidenced by Doyle in view of Gilhousen et al. because Schmitz suggests a rewriting device having a communication link with an external source and Doyle in view of Gilhousen et al. teaches means of identifying the rewriting device to the control center using the address of the device.

Claim 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Koelle et al. U.S Patent 5802485 and further in view of Henn et al. because .

Regarding claim 31, Schmitz teaches a control information rewriting system for a vehicle (figure 4) comprising: an electronic control unit (16) and the rewriting device output data to the electronic control (figure 4) unit but is silent on teaching the converted data which is converted from the predetermined data by the rewriting device based on the access information, and determines the legitimacy of the rewriting device by determining whether the converted data is formed from the predetermined data. Henn et al. in an art related invention in the same field of endeavor of reprogramming vehicular microcomputer teaches a reprogramming device transmitting converted data (col. 7 lines 25-30) to the control unit and the legitimacy of the rewriting device is determined based on the dialogue between the programming and the control unit (col. 7 lines 7-12).

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It would have been obvious to one of ordinary skill in the art for the converted data which is converted from the predetermined data by the rewriting device based on the access information, and determines the legitimacy of the rewriting device by determining whether the converted data is formed from the predetermined data in Schmitz in view of Koelle et al. as evidenced by Henn et al. because Schmitz teaches a control information rewriting system for a vehicle comprising: an electronic control unit and the rewriting device output data to the electronic control unit and Henn et al. teaches a reprogramming device transmitting converted data to the control unit and the legitimacy of the rewriting device is determined based on the dialogue between the programming and the control unit to ensure the authenticity of the programming device.

Regarding claim 32, Schmitz is silent on teaching the electronic control unit is set to a condition for waiting for an input of the control information to be rewritten into the nonvolatile memory when determining that the rewriting device is legitimate. Henn et al. in an art related invention in the same field of endeavor of reprogramming vehicular microcomputer teaches the rewriting device receives an acknowledge from the control unit (col. 6 lines 62-65) electronic control unit. The control unit is therefore automatically in the position of waiting for the programming device to receive the acknowledgement.

It would have been obvious one of ordinary skill in the art to a condition for waiting for an input of the control information to be rewritten into the nonvolatile memory when determining that the rewriting device is legitimate in Schmitz as evidenced by Henn et al. because Schmitz suggests verifying the record of the vehicle which automatically place the control unit in a waiting state and Henn et al. teaches the rewriting device receives an acknowledge from the control unit electronic control unit

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and the control unit is therefore automatically in the position of waiting for the programming device to receive the acknowledgement.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitz U.S Patent 5473540 in view of Lesesky et al. U.S Patent 6378959.

Regarding claim 35, Schmitz teaches a control information rewriting system for a vehicle (col. 3 lines 65-67) comprising: an electronic control unit (16) mounted in the vehicle for a vehicle control and having control information stored in electrically rewritable memory for the vehicle control (col. 5 lines 58-60); a rewriting device (20) connectable to the electronic control unit for rewriting the control information (col. 5 lines 60-61); and a control center (12) for performing data communication with the rewriting device (col. 5 lines 62-64). Schmitz also teaches running tests to determine if the controller needs reprogramming (col. 8 lines 15-20). Schmitz is however silent on teaching using a check sum to determine whether the program is normal. One skilled in the art recognizes that check sum is widely used to verify the integrity or identification of an information stored in memory as evidenced by Lesesky et al. (col. 20 lines 8-10).

It would have been obvious too one of ordinary skill in the art to use a check sum to determine whether the program is normal in Schmitz as evidenced by Lesesky et al. because Schmitz suggests performing a test to determine if it is necessary to upgrade the vehicle computer memory and one skilled in the art recognizes that check sum is widely used to verify the integrity or identification of a information stored in memory as evidenced by Lesesky et al.

Art Unit: 2635

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vernal U Brown whose telephone number is 703-305-3864. The examiner can normally be reached on M-Th, 8:30 AM-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached on 703-305-4704. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Vernal Brown
June 3, 2004

